

Call for interest for potential candidates for a post-doc position (3 years) in Economics of Innovation and/or Entrepreneurship and Innovation at University of Bergamo.

At the Department of Management, Economics and Quantitative Methods of the University of Bergamo, we are looking for potential candidates for a **research fellow position** (*3-year post-doc position, possibly transformed in an RTD-A position - assistant professor*) in **Economics of Innovation and/or Entrepreneurship and Innovation.**

Research Project:

Digital Transformation and Innovation Slowdown: a paradox or simply a delay in diffusion?

The research fellow position focuses on **the digital transformation and the innovation slowdown.**

The project intends to analyze the reasons for the apparent paradox that, despite of all the digitization, digitalization and digital transformation phenomena of the economy, a slowdown can be observed in the data relating to the innovativeness of a Country. The change of technological paradigm deriving from the introduction of new technologies related to digital transformation should lead to an increase in the levels of innovation: the availability of a mass of data unthinkable until a few decades ago and the digital technologies for processing and exploiting efficiently such a mass of data should facilitate innovation. Instead, we observe a decreasing trend starting from 2000.

Three hypotheses have been advanced in the literature

- i) measurement problems related to digital technologies (Syverson 2017, Byrne et al 2016, Fernald 2014): adequate indicators and concepts have not yet been developed that capture the importance and effectiveness of these technologies
- ii) Gordon (2012, 2015) and others identify a centuries-old stagnation in which the highly exploited technological potentials that were at their maximum exploitation 30/40 years ago tend to run out and new potentials do not seem to develop
- iii) Brynjolfsson and McAfee (2014) suggest that new digital technologies have not yet fully deployed their potential and a delayed spread is observed

The project **aims** to understand why, in the face of the development and diffusion of digital technologies, the rate of innovation slows down. The analysis is carried out for **Italy and for the Netherlands** which have diametrically opposed industrial compositions striving to relate industrial structure and industrial dynamics with the innovation slowdown.

Three the main themes of interest:

1. The concentration of innovative activity

Loecker et al. 2012 show that the productivity of R&D in terms of creating new ideas declines and only large companies are able to invest and finance the increasingly costly creation of new ideas. Are large companies the only ones able to efficiently exploit digital transformation? Why do new

companies seem to prefer leaving the market through M & A even if they could potentially exploit the innovations they have developed?

2. Weak market selection

Italy, unlike the Netherlands, is characterized by a weak market selection that allows the survival of less innovative and efficient companies. The weak selection affects the mass of micro and small businesses that make up the majority of the Italian firms (among which the “Family Firms”). They are also known as not particularly prone to innovation (Duran et al., 2016). Why are micro and small non-efficient firms - be they Family Firms or not - not being wiped out by serious economic crises or by normal market selection?

3. More exploitation and less exploration?

In an environment characterized by increasing uncertainty due to frequent macroeconomic shocks, global competition and technological uncertainty due to the rapid introduction of new technologies (including digital ones), do companies prefer to opt for lower risk strategies and less uncertainty? Are they more inclined to exploit the innovations already obtained, compared to strategies for further exploration, thus slowing down innovation?

The research fellow will develop together with prof. Elena Cefis (responsible of the project) all the parts of the project, including the theoretical, methodological, and empirical analysis, policy and management implications, and the writing and presentation of the resulting papers.

Phases and times (T1 = May 2019; T36 = May 2022)

T1-T6: Bibliographic survey and positioning of the relevant research questions within the literature

T4-T8: Preparation of the databases

T9-T18: Development of the economic and econometric model, elaboration of the results, of the policies and management implications concerning theme 1

T19-T28: The same for theme 2

T29-T36: The same for the theme 3

T18-T36: Dissemination and discussion of results in international conferences

The major contributions of this project are to be identified:

i) in the **micro-level analysis** (that is, using company-level data) of a phenomenon that until now has been analyzed (scarcely, since the published articles are few and concerning only Germany, USA and Canada) at the macro level;

ii) in the **comparative analysis** between two Countries with very different industrial structures. Prof. E. Cefis has access to the data of the two Countries in order to carry out this analysis;

iii) in the **development of empirical models** for the study of the **survival** of companies deriving from bio-statistics and bio-medicine that have not yet been used in economics. These models offer the possibility of a better analysis of the survival of companies and the study of the dynamics of the phenomenon;

iv) identification of **critical areas in the innovative process** at the enterprise level and at the system-Country level;

v) in the **implications of industrial economic policy** to identify alternative forms of support for innovation, to improve the innovative capacity of companies in order to tackle the main obstacles that may contribute to the innovation slowdown;

vi) in the value of **the implications of economic policy** that derive from it. The project is linked to the issue of **decreasing productivity** that characterizes the economy of European countries (central research topic for the Horizon 2020 programs). After a decade from the global financial crisis and near-zero interest rates, economic growth in European countries is still low. One of the determinants of economic growth is productivity growth, which in turn sees innovation as a driving factor. In the literature there are few analyses (macro) that study the reasons that can be the basis of the innovation slowdown to be able to explain, at least in part, the slowdown in productivity.

Knowledge of **Italian language is not required**, excellent ability to speak and write in **English is compulsory**. There are no restrictions regarding the nationality of the applicants. A strong knowledge in Statistics and Micro-Econometrics is a preferential competence.

Candidates are invited to express their interest by **sending an email** to elena.cefis@unibg.it (subject: CALL FOR INTEREST 2019). Candidates should attach their curriculum vitae, a detailed list of publications, and a brief statement to explain why they are interested in this call.

The deadline for expressions of interest is **February 15th, 2019**. All applications will be processed confidentially.

The research fellow will collaborate with Prof. Elena Cefis (responsible of the project) and she/he will be included in our Department that provides a dynamic research environment in which faculty members and distinguished visitors conduct both applied and theoretical research in all areas of economics and management.

The gross salary is in line with the Italian post-doc position (Euro 30,000 per year).

Please note that this is a **call for interest**, not a job vacancy announcement. **The Department will advertise the job vacancy later in the year (mid-February - March 2019).**

With best regards
Elena Cefis